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3	1. A nozzle of a rocket propulsion system for propelling a
4	vehicle during a launch phase, the nozzle comprising,
5	a cone for exhausting exhaust from the rocket propulsion
6	system, and
7	combustible material disposed on an interior surface of the
8	cone, the exhaust igniting the combustible material outgassing
9	diversion gases creating an outgassing diversion pressure upon
10	the exhaust for diverting the exhaust gases away from the
11	interior surface during the launch phase.
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15	2. The nozzle of claim 1 wherein,
16	the combustible material is a solid rocket propellant.
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20	3. The nozzle of claim 1 wherein,
21	the cone is bell shaped.
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What is claimed is:

26 4. The nozzle of claim 1 wherein, the combustible material circumferentially lines the interior surface of an aft end of the cone.

5. The nozzle of claim 1 wherein,

the combustible material is tapered in thickness from a zero thickness at a forward end to a final thickness at an aft end.

6. The nozzle of claim 1 wherein,

the combustible material is tapered in thickness from a zero thickness at a forward end to a final thickness at an aft end, and

the forward end has a leading edge moving down the interior of the cone during burning of the combustible material during the launch phase decreasing the outgassing diversion pressure.

7. The nozzle of claim 1 wherein,

the combustible material is tapered in thickness from a zero thickness at a forward end to a final thickness at an aft end,

the forward end has a leading edge moving down the interior of the cone during burning of the combustible material during the launch phase for decreasing the outgassing diversion pressure during the launch phase, and

the decreasing of the outgassing diversion pressure tending to increase an effective expansion ratio of the cone.

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8. The nozzle of claim 1 wherein,

the combustible material is tapered in thickness from a zero thickness at a forward end to a final thickness at an aft end,

the forward end having a leading edge moving down the interior of the cone during burning of the combustible material during the launch phase for decreasing the outgassing diversion pressure during the launch phase, and

the decreasing outgassing diversion pressure tending to increase an effective expansion ratio of the cone during the launch phase for increasing an effective lift capability of the rocket propulsion system.

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9. A bell nozzle of rocket propulsion system for propelling a vehicle during a launch phase, the nozzle comprising,

a bell shaped cone for exhausting exhaust from the rocket propulsion system, and

a combustible material circumferentially lining an aft end interior surface of the bell shaped cone, the combustible material disposed on an interior surface of the bell shaped cone, the combustible material being tapered in thickness from a zero thickness at a forward end to a final thickness at the aft end, the exhaust igniting the solid rocket propellant for outgassing diversion gases for creating an outgassing diversion pressure upon the exhaust for diverting the exhaust gases during the launch phase, the forward end having a leading edge moving down the interior of the bell shaped cone during burning of the solid rocket propellant for decreasing the outgassing diversion pressure during the launch phase, the decreasing outgassing diversion pressure tending to increase an effective expansion ratio of the bell shaped cone during the launch phase.

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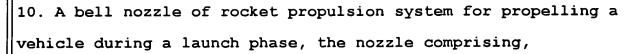
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a bell shaped cone for exhausting exhaust from the propulsion system, and

a solid rocket propellant circumferentially lining an aft end interior surface of the bell shaped cone, the solid rocket propellant being disposed on an interior surface of the bell shaped cone, the solid rocket propellant being tapered in thickness from a zero thickness at a forward end to a final thickness at the aft end, the exhaust igniting the solid rocket propellant for outgassing diversion gases for creating an outgassing diversion pressure upon the exhaust for diverting the exhaust gases during the launch phase, the forward end having a leading edge moving down the interior of the bell shaped cone during burning of the solid rocket propellant for decreasing the outgassing diversion pressure during the launch phase, the decreasing outgassing diversion pressure tending to increase an effective expansion ratio of the bell shaped cone during the launch phase for increasing an effective lift capability of the rocket propulsion system.

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